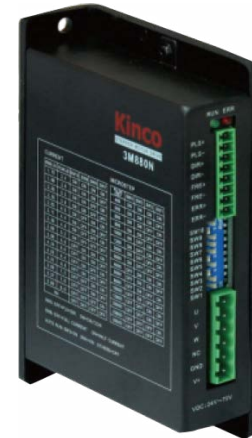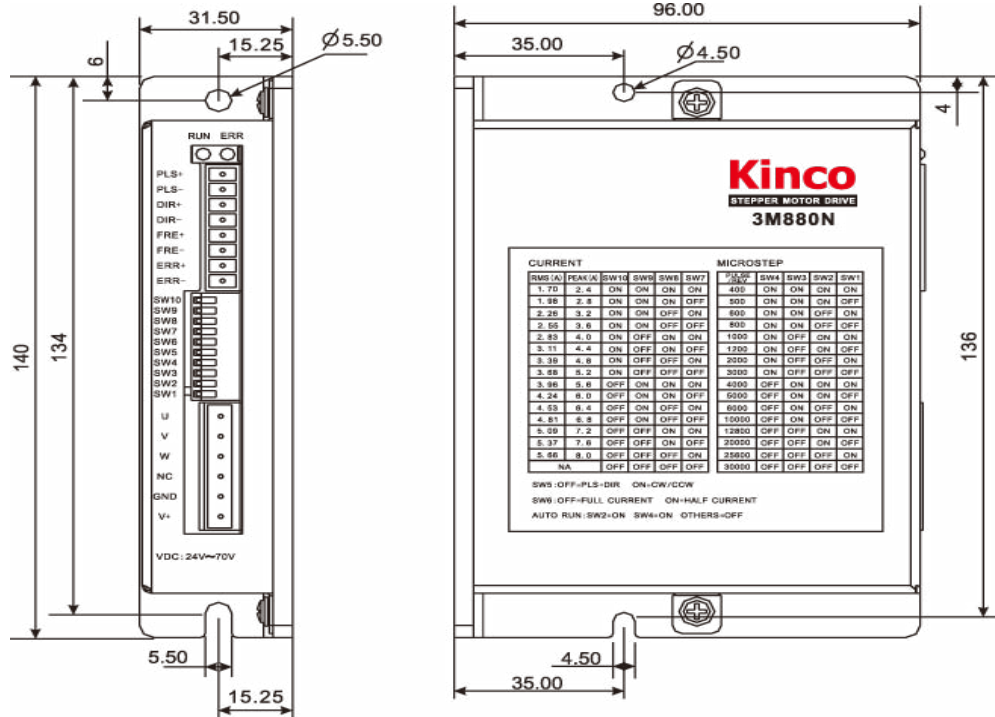# Kinco

3M880N

FEATURES

- *Supply Voltage 24 ~ 70VDC*
- *Over Voltage Protection 90V*
- *Under Voltage Protection 15V*
- *Cooling Method (Natural Air Cooling)*
- *Operating Temperature 0°C ~ 45°C*
- *Operating Humidity <85% RH
  (Non-Condensing or Water Drops)*
- *Weight 0.4Kg*

DESCRIPTION

The 3M880N Series Stepper Driver provides improved dynamic drive performance. This series drive accepts 24~70VDC input, with up to 8 Amps per phase, and provides users with a step resolution of up to 30,000 steps per revolution. As an additional feature, this drive provides users with the ability to select an auto reduce current setting which helps reduce power consumption and motor heat, while improving motor lifetime. Also, the isolation inputs help minimize interference from external electrical equipment as well has improving performance.

DIMENSIONS

CURRENT						MICROSTEP				
RMS (A)	PEAK (A)	SW10	SW9	SW8	SW7	PULSE/REV	SW4	SW3	SW2	SW1
1.70	2.4	ON	ON	ON	ON	400	ON	ON	ON	ON
1.98	2.8	ON	ON	ON	OFF	500	ON	ON	ON	OFF
2.26	3.2	ON	ON	OFF	ON	600	ON	ON	OFF	ON
2.55	3.6	ON	ON	OFF	OFF	800	ON	ON	OFF	OFF
2.83	4.0	ON	OFF	ON	ON	1000	ON	OFF	ON	ON
3.11	4.4	ON	OFF	ON	OFF	1200	ON	OFF	ON	OFF
3.39	4.8	ON	OFF	OFF	ON	2000	ON	OFF	OFF	ON
3.68	5.2	ON	OFF	OFF	OFF	3000	ON	OFF	OFF	OFF
3.96	5.6	OFF	ON	ON	ON	4000	OFF	ON	ON	ON
4.24	6.0	OFF	ON	ON	OFF	5000	OFF	ON	ON	OFF
4.53	6.4	OFF	ON	OFF	ON	6000	OFF	ON	OFF	ON
4.81	6.8	OFF	ON	OFF	OFF	10000	OFF	ON	OFF	OFF
5.09	7.2	OFF	OFF	ON	ON	12800	OFF	OFF	ON	ON
5.37	7.6	OFF	OFF	ON	OFF	20000	OFF	OFF	ON	OFF
5.66	8.0	OFF	OFF	OFF	ON	25000	OFF	OFF	OFF	ON
NA		OFF	OFF	OFF	OFF	30000	OFF	OFF	OFF	OFF

SW5 :OFF=PLS·DIR   ON=CW/CCW

SW6 :OFF=FULL CURRENT   ON=HALF CURRENT

AUTO RUN: SW2=ON   SW4=ON   OTHERS=OFF

(Units Are In mm)

SPECIFICATIONS

Technical Specifications	
Input Voltage	24 to 70VDC
Over-Voltage Protection	90V
Under-Voltage Protection	15V
Overheat Protection	>80ºC (Temperature of Thermistor)
Phase Current (Peak)	2.4 to 8.0, Total of 15 Setting Values (Unit:A)
Subdivision	400 to 30000 Pulse/rev. Total 16 Subdivisions
Adaptable Motor	57 or 85 Series Three-Phase Hybird Stepper Motor
Input Signal	PLS(CW), DIR(CCW), A/B, FREE, Current Range: 6 to 16 mA
Control Signal Mode	PLS+DIR, CW/CCW, A+B
Output Signal	ERR, Open Collector Output, Maximum Current: 20mA
Automatic Half Current	The Driver will Reduce Phase Current of the Motor by a Half in 1.5 Seconds
Protection	Over-Voltage, Under-Voltage, Over-Current, Overheat
Cooling Method	Natural Air Cooling
Operation Environment	Avoid the Environment with a Great amount of Metallic Powder, Oil Mist, or Erosive Gases.
Operation Humidity	<85%, RH(Non-Condensing or Water Drops)
Operation Temperature	0ºC to +40ºC
Storage Temperature	-20ºC to 70ºC
Weight	0.4Kg
Dimensions	140x96x31.5mm
Ingress Protection	IP20

ROTARY SWITCH SETTING

Function Setting:

Input signal mode selection:
SW5=OFF: Single pulse input (PLS+DIR):
SW%=ON:vDouble pulse input, (CW/CCW).
Automatic half current.
SW6=ON: valid. SW6=OFF: invalid.
Test running:
SW4=ON, SW2=ON, others are OFF: in-valid.

Micro-step smooth filter:
SW4=ON, SW1=ON, others are OFF, after re-power driver, Micro-step smooth filter will start working:
SW3=ON, SW1=ON, others are OFF, after re-power, Micro-step smooth filter will stop working.

L011317

ROTARY SWITCH SETTING

Subdivision Setting (Unit PULSE/REV)				
SW1	SW2	SW3	SW4=ON	SW4=OFF
ON	ON	ON	400	4000
OFF	ON	ON	500	5000
ON	OFF	ON	600	6000
OFF	OFF	ON	800	10000
ON	ON	OFF	1000	12800
OFF	ON	OFF	1200	20000
ON	OFF	OFF	2000	25600
OFF	OFF	OFF	3000	30000

Current Setting (Peak, Unit:A)				
SW7	SW8	SW9	SW10=ON	SW10=OFF
ON	ON	ON	2.4	5.6
OFF	ON	ON	2.8	6
ON	OFF	ON	3.2	6.4
OFF	OFF	ON	3.6	6.8
ON	ON	OFF	4	7.2
OFF	ON	OFF	4.4	7.6
ON	OFF	OFF	4.8	8
OFF	OFF	OFF	5.2	NA

L011317